



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/700,321	01/16/2001	Martin Weston	87805-9016	4846

23409 7590 08/09/2004

MICHAEL BEST & FRIEDRICH, LLP
100 E WISCONSIN AVENUE
MILWAUKEE, WI 53202

EXAMINER

TRAN, TRANG U

ART UNIT PAPER NUMBER

2614

DATE MAILED: 08/09/2004

17

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/700,321

Applicant(s)

WESTON ET AL.

Examiner

Trang U. Tran

Art Unit

2614

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 September 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>16</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114.

Applicant's submission filed on June 07, 2004 has been entered.

Response to Arguments

2. Applicant's arguments filed Sept. 11, 2003 have been fully considered but they are not persuasive.

In re page 4-5, applicants argue that the active noise cancellation of Klippel is a highly specialized field and there would be no motive for one of ordinary skill in the art to look to Klippel for assistance in solving a problem in suppressing compression artifacts in video signal of Brailean and further critical issue concerns the non-linear behavior which is central to the function of Klippel, that one of ordinary skill in the art would not consider the structure of Figure 15 of Klippel to be a low cost alternative to the Figure 5 structure of Brailean, and it is not at all apparent how a structure such as that of Figure 15 of Klippel might be incorporated in Brailean and – even if it were – the function performed would change fundamentally.

In response, the examiner respectfully disagrees. As recognized by applicants that Klippel discloses method and apparatus for the active attenuation

Art Unit: 2614

of sound by measuring sound, generating a signal in precise anti-phase in a controller and injecting a canceling sound through a loudspeaker and his method and apparatus can be applied to linear or nonlinear filter (col. 5, lines 32-55). Applicants cannot show non-obviousness by attacking the references individually where, as here, the rejection is based on a combination of references. In re Keller, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). The examiner cites Klippel to establish that it would have been obvious to the artisan to multiply together three filtered signals to produce an output video signal. The multiplying together the three filtered signals to produce an output video signal as a result as taught by Klippel has similar application whether the signal is audio or video signal. The reference must be considered not only for what it expressly teaches, but also for what it fairly suggests. In re Burckel, 592 F.2d 1175, 201 USPQ 67 (CCPA 1979). The artisan is presumed to know something about the art apart from what references literally disclose. In re Jacoby, 309 F.2d 513, 135 USPQ 317 (CCPA 1962). The examiner believes that the artisan would have recognized the obviousness of multiplying together the three filtered signals to produce an output signal.

Additionally, Klippel teaches in col. 2, lines 47-51 that "Another object is to realize an active attenuation system for high amplitude sound comprising a minimum of elements and requiring a minimum of processing capacity in a digital signal processor (DSP) to keep the cost of this system low". Clearly, the motivation for the combination is to reduce the cost of the system by minimizing elements and processing capacity of digital signal processor is taught in Klippel.

Art Unit: 2614

Finally, after considering Brailean and Klippel, one of ordinary skill in the art has no difficulty in combining the references as proposed by the examiner.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brailean (US Patent No. 5,802,218) in view of Klippel (US Patent No. 6,005,952).

In considering claim 1, Brailean discloses all the claimed subject matter, note 1) the claimed comprising the steps of conducting the linear filtering operations on an input video signal to produce filtered signals, linear filtering operation comprising the taking of a weighted sum of pixels is met by the post-processing filter 500 which suppress mosquito and blocking artifacts and performs resizing in accordance with the present invention (Fig. 5, col. 6, lines 5-53). However, Brailean explicitly does not disclose the claimed three linear filtering operations on an input video signal to produce three filtered signals, and multiplying together said three filtered signals to produce an output video signal. Klippel teaches that in the third-order branch the input 388 is connected to three linear filters 392, 406 and 408, the output of these filters is multiplied by using the multipliers 402 and 410 and supplied to the linear filter 414 (Fig. 15, col. 10, line

Art Unit: 2614

65 to col. 11, line 18). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the third-order branch which includes three linear filters as taught by Klippel into Brailean's system in order to require a minimum of processing capacity in a digital signal processor (DSP) to keep the cost of the system low.

In considering claim 2, the claimed wherein said weighted sum is taken over pixels of the input video signal defined by a filter aperture is met by the post-processing filter 500 which suppress mosquito and blocking artifacts and performs resizing in accordance with the present invention (Fig. 5, col. 6, lines 5-53) of Brailean.

In considering claim 3, the claimed wherein all three linear filtering operations have the same filter aperture is met by the post-processing filter 500 which suppress mosquito and blocking artifacts and performs resizing in accordance with the present invention (Fig. 5, col. 6, lines 5-53) of Brailean.

In considering claim 4, the claimed wherein for at least one linear filtering operation, the taking of a weighted sum of pixels includes the output pixel of the respective linear filtering operation is met by the post-processing filter 500 which suppress mosquito and blocking artifacts and performs resizing in accordance with the present invention (Fig. 5, col. 6, lines 5-53) of Brailean.

In considering claim 5, the claimed wherein the product of two of said filtered signals is formed and a linear filtering operation conducted on that product, prior to multiplication of said product by the third filtered signal is met by the multipliers 402 and 410 (Fig. 15, col. 10, line 65 to col. 11, line 18) of Klippel.

Art Unit: 2614

In considering claim 6, the claimed said three filtered signals are multiplied together without intervening filtering of the three filtered signals is met by the multipliers 402 and 410 (Fig. 15, col. 10, line 65 to col. 11, line 18) of Klippel.

In considering claim 7, the claimed wherein a further linear filtering operation is conducted in parallel on the input video signal, with the result of said further linear filtering operation being combined with the multiplication product of said three filtered signals to produce an output video signal is met by the linear filter 384 and the summer 398 (Fig. 15, col. 11, lines 3-14) of Klippel.

Claim 8 is rejected for the same reason as discussed in claims 1 and 5.

Claims 9-11 are rejected for the same reason as discussed in claims 2-4, respectively.

In considering claim 12, the combination of Brailean and Klippel disclose all the limitations of the instant invention as discussed in claim 8, except for providing the claimed wherein there is further provided a linear filter connected between the output of said first multiplier and the input to said second multiplier. Using the linear filter is old and well known in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the old and well known linear filter connected between the output of said first multiplier and the input to said second multiplier into the combination of Brailean and Klippel's system since it merely selecting available component.

In considering claim 13, the claimed wherein there is a direct connection between the output of said first multiplier and the input to said second multiplier is

Art Unit: 2614

met by the multipliers 402 and 410 (Fig. 15, col. 10, line 65 to col. 11, line 18) of Klippel.

In considering claim 14, the claimed wherein the apparatus further comprises a linear filter path connected with the input terminal, and a combiner for combining the outputs of the linear filter path with the output of said second multiplier is met by the linear filter 384 and the summer 398 (Fig. 15, col. 11, lines 3-14) of Klippel.

In considering claim 15, the claimed wherein a filter is interposed between the output of the second multiplier and said combiner is met by the linear filter 414 (Fig. 15, col. 11, lines 3-14) of Klippel.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Art Unit: 2614

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Trang U. Tran whose telephone number is (703) 305-0090. The examiner can normally be reached on 8:00 AM - 5:30 PM, Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John W. Miller can be reached on (703) 305-4795. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


MICHAEL H. LEE
PRIMARY EXAMINER

TT TT
August 7, 2004